

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of the Petition of)
Otay Municipal Water District for)
Review of Order No. 75-51 of the)
California Regional Water Quality)
Control Board, San Diego Region)
_____)

Order No. WQ 76-24

BY THE BOARD:

On October 14, 1975, the Otay Municipal Water District (petitioner) petitioned the State Water Resources Control Board (State Board) for review of Order No. 75-51 of the California Regional Water Quality Control Board, San Diego Region (Regional Board). Order No. 75-51 was adopted on September 15, 1975, and prescribed waste discharge requirements for petitioner's Jamacha Basin Water Reclamation Project.

By letters dated November 10, 1975, and December 5, 1975, petitioner's attorney requested that processing of the petition be delayed to permit development of additional comments for submittal to the State Board and to permit petitioner to file a request with the Regional Board that the Water Quality Control Plan, San Diego Basin (Basin Plan) be amended. No formal request for amendment of the Basin Plan was ever submitted by petitioner to the Regional Board, and by letter dated July 23, 1976, the State Board staff informed petitioner that it intended to proceed with processing of the petition. The July 23, 1976, letter informed petitioner that additional information could be submitted by petitioner on or before August 20, 1976. Additional information was in fact submitted by letter dated August 19, 1976.

I. BACKGROUND

The petitioner provides water and sewerage service to a suburban area of San Diego County southeast of the City of San Diego. On June 17, 1975, petitioner submitted a Report of Waste Discharge to the Regional Board proposing the discharge of up to 2.0 MGD of treated domestic wastewater from a new treatment plant to be located near Jamacha Junction. The purpose of the project was identified therein as treatment and reclamation of wastewater. Treatment processes were to include biological secondary treatment, chlorination, and filtration. The effluent was to be used for irrigation of agricultural and open space lands. Petitioner proposed 2.0 MGD of emergency capacity in the San Diego Metropolitan Sewer System for effluent disposal in case of breakdowns or other unforeseen events.

On September 15, 1975, the Regional Board adopted Order No. 75-51 prescribing waste discharge requirements. Effluent limitations for total dissolved solids (TDS) were established at 500 mg/l in the Lower Sweetwater Hydrologic Subunit and 330 mg/l in the Otay Hydrological Subunit. The groundwater quality objectives established in the Basin Plan are 1500 mg/l for the Lower Sweetwater Hydrologic Subunit and 1000 mg/l for the Otay Hydrological Subunit.

II. CONTENTIONS AND FINDINGS

The action of the Regional Board was inappropriate in that:

1. Contention: The TDS limitations in the Regional Board Order do not implement the Basin Plan, in that they are

substantially less than the TDS objectives listed in the Basin Plan.

2. Contention: The TDS limitations in the Regional Board Order are substantially lower than what is necessary to protect present and probable future beneficial uses of water in the hydrologic subunits where disposal would occur.

3. Contention: The TDS limitations in the Regional Board Order do not adequately take into consideration all the characteristics of the hydrographic unit under consideration, including the quality of water available, in that water presently supplied to the Jamacha Basin Area is from the Colorado River and has an average TDS concentration of approximately 750 mg/l and the future supply, which will be a blend of Colorado River water and Northern California water, will have an average TDS concentration of approximately 500 mg/l.

Findings: We find that the groundwater hydrology of the Otay and Lower Sweetwater Hydrologic Subunits is much more complex than the Basin Plan and the petitioner's consultants indicate. The Basin Plan implies a single groundwater regime underlying each hydrologic subunit. This is not in accordance with data published by the Department of Water Resources which describes these hydrologic subunits as containing two major groundwater-producing formations: River Valley alluvium (valley regime) and San Diego formation (mesa regime).^{1/} The model proposed by

^{1/} Department of Water Resources Bulletin No. 106-2, "Groundwater Occurrence and Quality, San Diego Region", pages 129 through 134.

the petitioner's consultants of one groundwater regime underlying each river valley and another underlying each mesa area, while closer to the true conditions, is also an oversimplification.

The groundwater in the valley regimes is now beneficially used. Any irrigation over the mesa regime regardless of the quality of the water used will, as the petitioner admits in the information submitted August 19, 1976,^{2/} result in an accelerated degradation of the valley groundwater. This will occur due to the percolating irrigation water causing a surcharge on the existing brackish connate water underlying the the mesa thus forcing the connate water or a mixture of connate water and percolated irrigation water down into the valley regime.

The mechanism whereby water would move from the mesa regime to the valley regime is exceedingly difficult to predict. The geology of the mesa is complicated by several deep canyons and a relatively impervious clay strata. It appears probable that a mixture of connate and percolated water would occasionally surface in the canyons thus degrading surface waters in the valleys and that subsurface flow would cause the same result in the valley groundwater. The petitioner's consultants suggest a time period of 30 to 50 years before noticeable degradation would occur.^{2/} While timing is the most difficult factor to predict, a much shorter period appears more probable. However, even if the period were as long as petitioner's consultants suggest, the degradation

^{2/} Letter of William J. Ganus, Registered Geologist, dated February 12, 1976.

of the groundwater would be inconsistent with the Basin water quality objectives.

We find no merit in petitioner's contentions that the TDS limitations set by the Regional Board do not implement the Basin Plan even though the TDS limits are substantially lower than the water quality objectives specified in the Basin Plan for the receiving waters. Where, as in this instance, adopted water quality objectives will be violated by a proposed discharge of wastewater due to hydrological conditions as well as wastewater constituents, the Regional Board and the State Board have ample authority to prohibit or limit such discharges (California Water Code Section 13243 and Section 13263(b)).

We find that the Regional Board's Order is appropriate and proper in that it serves to implement the water quality objectives contained in the Basin Plan. However, because of the nature and extent of the existing beneficial uses of the groundwaters and the potential for reclamation in this area, it would be appropriate for the Regional Board to review the groundwater objectives of the Otay and Lower Sweetwater Hydrologic Subunits.

III. CONCLUSIONS

After review of this matter, and for the reasons heretofore expressed, we conclude that the action of the Regional Board in adopting Order No. 75-51 was appropriate and proper.

However, the Regional Board should expedite a review of the Basin Plan groundwater quality objectives for the Otay and Lower Sweetwater Hydrologic Subunits. Said review should be completed no later than December 1977. Should the study result in modification of the Basin Plan groundwater quality objectives for the Otay and Lower Sweetwater Hydrologic Subunits, the Regional Board should, at the petitioner's request, issue waste discharge requirements for petitioner's proposed Jamacha Basin Water Reclamation Project consistent with the revised groundwater quality objectives. In order that waste discharge requirements for the proposed discharge do not terminate, Order No. 75-51 should remain in effect until January 1, 1978.

IV. ORDER

IT IS HEREBY ORDERED, that Regional Board Order No. 75-51 is upheld; and, the Regional Board shall expedite a review of the Basin Plan groundwater quality objectives for the Otay and Lower Sweetwater Hydrologic Subunits considering the present and future beneficial uses of the groundwater and the achievability of the objectives. Said review shall be completed not later than December 1977. Should this study result in modification of the Basin Plan groundwater objectives for the Otay or Lower Sweetwater Hydrologic Subunit, the Regional Board shall, at the petitioner's request, issue waste discharge requirements for petitioner's Jamacha Basin Water Reclamation Project consistent with the revised groundwater quality objectives.

It is also ordered that Order No. 75-51 will remain in effect until January 1, 1978.

Dated: December 16, 1976

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John E. Bryson
John E. Bryson, Chairman

W. Don Maughan
W. Don Maughan, Vice Chairman

W. W. Adams
W. W. Adams, Member

Roy E. Dodson
Roy E. Dodson, Member

ABSENT
Jean Auer, Member